Dr. Christian Barrientos

Email: cbarrientos@usf.edu

Education

- **Universitat Politecnica de Catalunya** — Barcelona, España
  Ph. D. Applied Mathematics — 2004
- **University of Puerto Rico** — San Juan, Puerto Rico
  Master of Sciences - Mathematics — 1997
- **Universidad Catolica de Valparaso** — Valparaso, Chile
  Bachelor - Mathematics — 1990

Academic Experience

University of South Florida	Tampa, Florida, USA
Assistant Professor of Instruction	**August 2023 - Present**
Valencia College	Orlando, Florida, USA
	August 2018 - July 2023
Clayton State University, Department of Mathematics	Morrow, Georgia, USA
	August 2006 - May 2017
University of Central Florida, Department of Mathematics	Orlando, Florida, USA
	August 2003 - May 2006

Publications

Published Articles

On the number of caterpillars, and b-edge consecutive edge magic labelings, **Indonesian Journal of Combinatorics**, **6(1)** (2022), 58{65.

On the generation of alpha graphs, **J. Algebra Comb. Discrete Appl**, **9(2)** (2022), 31{44.

Optimal maximal graphs, **Trans. Comb.**, **11(2)** (2022), 85{97 (with M. Youssef).

Harmonious graphs from -trees, **Electron. J. Graph Theory Appl.**, **9(2)** (2021), 357{375. (with S. Minion).

Some families of -labeled subgraphs of the integral grid, **Commun. Comb. Optim.**, **8(1)** (2023), 77-101. (with S. Minion). Published online on 10/11/2021.

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On additive vertex labelings, **Indonesian Journal of Combinatorics**, **4(1)** (2020), 34{52.

Folding trees gracefully, **AKCE Int. J. Graphs Comb.**, **17(3)** (2020), 796-800 (with S. Minion).

New advances in Kotzig's conjecture, **Fundamental Journal of Mathematics and Applications** **2(2)** (2019), 186{194 (with S. Minion).

Counting and labeling grid-related graphs, **Electron. J. Graph Theory Appl.**, **7(2)** (2019), 349{363. (with S. Minion).

The graceful coalescence of alpha cycles, **Communications in Advanced Mathematical Sciences**, **2(2)** (2019), 114{120. (with S. Minion).

New -trees and graceful unions of -graphs and linear forests, **J. Combin. Math. Combin. Comput.**, **108** (2019), 205{220 (with S. Minion).

Series-parallel operations with -graphs, **Theory and Applications of Graphs**, **6(1)** (2019), Article 4. (with S. Minion).

Special graceful labelings of irregular fences and lobsters, **Universal Journal of Mathematics and Applications**, **2(1)** (2019), 1{10.

Snakes and caterpillars in graceful graphs, **J. Algorithms Comput.**, **50(2)** (2018), 37{47. (with S. Minion).

The number of snakes in a box, **Fundamental Journal of Mathematics and Applications**, **1**(2) (2018), 145{156 (with S. Minion).

On the number of -labeled graphs, **Discuss. Math. Graph Theory**, **38** (2018), 177{188 (with S. Minion).

On the graceful Cartesian product of -trees, **Theory and Applications of Graphs**, **4(1)** (2017), Article 3. (with S. Minion).

Snakes: from graceful to harmonious, **Bull. Inst. Combin. Appl.**, **79** (2017), 95{107. (with S. Minion).

Improved bounds for relaxed graceful trees, **Graphs and Combin.**, **33(2)** (2017), 287{305. (with E. Krop).

Constructing graceful graphs with caterpillars, **J. Algorithms Comput.**, **48(1)** (2016), 117{125. (with S. Minion).

A new attack on Kotzig's conjecture, **Electron. J. Graph Theory Appl.**, **4(2)** (2016), 119{131. (with S. Minion).

Mean trees, **Bul. Inst. Combin. Appl.**, **75** (2015), 8{18.

Alpha labelings of snake polyominoes and hexagonal chains, **Bul. Inst. Combin. Appl.**, **74** (2015), 73{83. (with S. Minion).

Enumerating families of labeled graphs, **Journal of Integer Sequences**, **18** (2015), Article 15.1.7 (with S. Minion).

The mean labeling of some crowns, **J. Algorithms Comput.**, **45** (2014), 43{54. (with M.E. Abdel-Aal, S. Minion, and D. Williams).

Three graceful operations, **J. Algorithms Comput.**, **45** (2014), 13{24. (with S. Minion).

On graceful supersubdivisions of graphs, **Bul. Inst. Combin. Appl.**, **70** (2014), 77{85. (with S. Barrientos).

Mean graphs, **AKCE J. Graphs Comb.**, **11** (2014), No. 1, 13{26. (with E. Krop).

Operations with mean graphs, **Congr. Numer.**, **217** (2013), 5{19. (with S. Bailey).

Some theorems on the q-analogue of the generalized Stirling numbers and the combinatorics of the 0-1 tableaux. **Bull. Malays. Math. Sci. Soc. (2) 34(3)** (2011), 1{15.(withR. Corcino).

Graceful and edge-antimagic labelings. **Ars Combin.**, **96** (2010), 505{513. (with M. Baca).

On graceful chain graphs. **Util. Math.**, **78** (2009), 55{64.

Odd-graceful labelings of trees of diameter 5. **AKCE J. Graphs Comb.**, **6** (2009), 307{313.

Irregular colorings of some graph classes. **Bul. Inst. Combin. Appl.**, **55** (2009), 105{119. (with M. Anderson,

Invariants of Fibonacci graphs. **J. Combin. Math. Combin. Comput.**, **68** (2008), 273{ 285. (with M. Anderson, R.C. Brigham, J.R. Carrington, R.P. Vitray, and J. Yellen).

Maximum demand graphs for eternal security. **J. Combin. Math. Combin. Comput.**, **61** (2007), 111{127. (with M. Anderson, R.C. Brigham, J.R. Carrington, R.P. Vitray, and J. Yellen.)

Graceful arbitrary super-subdivisions of graphs. **Indian J. Pure Appl. Math.** , **38** (2007), 445{450.

Graceful graphs with pendant edges. **Australas. J. Combin.**, **33** (2005), 99{107.

The gracefulness of unions of cycles and complete bipartite graphs. **J. Combin. Math. Combin. Comput.**, **52** (2005), 69{78.

Graceful labeling of chain and corona graphs. **Bul. Inst. Combin. Appl.** , **34** (2002), 17{26.

Equitable labelings of corona graphs. **J. Combin. Math. Combin. Comput.**, **41** (2002), 139{149.

Graceful labelings of cyclic snakes. **Ars Combin.**, **60** (2001), 85{96.

New families of equitable graphs. **Util. Math.** , **60** (2001), 123-1-37.

On 2-equitable labelings of graphs. **Notas Soc. Mat. Chile (N.S.)**, **15** (1996) No. 1, 97{110. (with H. Hevia).

Equitable labelings of forest. **Combinatorics and Graph Theory `95** (ed. Y. Alavi). World Scienti c, Singapore **1** (1995), 1{26. (with I.J. Dejter and H. Hevia).

Randomly star-decomposable graphs. **Congr. Numer.**, **64** (1988), 193{195. (with A. Bernasconi, E. Jeltch, C. Troncoso, and S. Ruiz).

Other Publications

Sequence A079273: Wiener index of the caterpillar of diameter 3 where each internal vertex has attached n 2 pendent vertices. The On-Line Encyclopedia of Integer Sequences. March 31 2023.

Sequence A115514: Number of 2-element subsets of $\{1, 2, ..., n + 2\}$ such that the absolute di erence of the elements is $k + 1$, where 1 k n. The On-Line Encyclopedia of Integer Sequences. June 27 2022.

Sequence A008805: Number of connected bipartite graphs with $n + 1$ edges and a stable set of cardinality 2. The On-Line Encyclopedia of Integer Sequences. June 15 2022.

Sequence A000096: Number of bipartite graphs with $2n$ or $2n + 1$ edges, no isolated vertices, and a stable set of cardinality 2. The On-Line Encyclopedia of Integer Sequences. June 13 2022.

Sequence A008611: Number of multiples of 3 between n and $2n$. The On-Line Encyclopedia of Integer Sequences. December 20 2021.

Sequence A001900: Number of 0-1 square matrices of order $n + 1$ with exactly $2n + 1$ nonzero entries where the cell $(i; j)$ is 1 for all $i + j = n + 2$ and every descending diagonal has exactly one 1. The On-Line Encyclopedia of Integer Sequences. July 17 2021.

Sequence A061925: Number of square polyominoes with at least $2n$ 2 cells whose bounding box has order 2 n. The On-Line Encyclopedia of Integer Sequences. January 1 2021.

Sequence A102526: Number of homeomorphically irreducible caterpillars with $n + 3$ edges. The On-Line Encyclopedia of Integer Sequences. September 12 2020.

Sequence A102541: Number of irreducible caterpillars with $n + 3$ edges and diameter $k + 2$. The On-Line Encyclopedia of Integer Sequences. April 5 2020.

Sequence A329910: Number of harmoniously labeled graphs with n edges and at most n vertices. The On-Line Encyclopedia of Integer Sequences. November 23 2019.

Sequence A308203: Number of non-isomorphic kC_n-snakes for $n \geq 3$ and $k \geq 2$. The On-Line Encyclopedia of Integer Sequences. May 15 2019.

Sequence A071232: Number of non-isomorphic $8C_m$-snakes. The On-Line Encyclopedia of Integer Sequences. May 16 2019.

Sequence A057979: Number of non-isomorphic outerplanar graphs of order n $\geq$ 3, maximum degree 3, and largest possible size. The On-Line Encyclopedia of Integer Sequences (with S. Minion). February 27 2018.

Sequence A003453: Number of non-isomorphic outerplanar graphs of order n $\geq$ 3 and size n + 2. The On-Line Encyclopedia of Integer Sequences (with S. Minion). February 27 2018.

Sequence A194005: Number of symmetric binary strings of odd length n with Hamming weight $k > 0$ and no consecutive 1's. The On-Line Encyclopedia of Integer Sequences (with S. Minion). February 27 2018.

Sequence A016777: The size of any snake polyomino with n cells. The On-Line Encyclopedia of Integer Sequences (with S. Minion). February 27 2018.

Sequence A255908: Number of -labeled graphs with n edges whose labeling is bipartite with boundary value . The On-Line Encyclopedia of Integer Sequences (with S. Minion). March 10 2015.

Sequence A085527: Number of -labeled graphs with n vertices. The On-Line Encyclopedia of Integer Sequences (with S. Minion). February 20 2015

Sequence A241094: Number of -labeled graphs that do not use the label i, where 1 $\leq$ i $\leq$ n 1. The On-Line Encyclopedia of Integer Sequences (with S. Minion). April 15 2014

Sequence A245517: Number of -labeled graphs with n edges and boundary value that do not use one number from $\{1; 2; ::::; n$ $1\}$ as a label, n $\geq$ 4, 1 $\leq$ n 2. The On-Line Encyclopedia of Integer Sequences (with S. Minion). July 24 2014.

Sequence A245518: Number of -labeled graphs with n edges that do not use the label i for 1 $\leq$ i $\leq$ n 1 and n $\geq$ 4. The On-Line Encyclopedia of Integer Sequences (with S. Minion). July 24 2014.

Sequence A245519: Number of -labeled graphs with n edges and at most n vertices, n $\geq$ 1. The On-Line Encyclopedia of Integer Sequences (with S. Minion). July 24 2014.